

OCD-HOBBS

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Form 3160-3
(April 2004)

APR 11 2011

HOBBSOCD

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM-125173, NM-94192
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Cimarex Energy Co. of Colorado (162683)		7. If Unit or CA Agreement, Name and No. Pending
3a. Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701		8. Lease Name and Well No. (38536) North Young 15 Federal Com No. 2
3b. Phone No. (include area code) 432-571-7800		9. API Well No. 30-025-40118
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 2310 FSL & 330 FWL At proposed prod. Zone 1980 FSL & 330 FEL Horizontal Bone Spring test		10. Field and Pool, or Exploratory Young; Bone Spring (65330)
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area 15-18S-32E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 660'	16. No of acres in lease NM-125173 - 240 acres NM-94192 - 241.13 acres	12. County or Parish Lea
17. Spacing Unit dedicated to this well N2S2 160	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1650'	13. State NM
19. Proposed Depth Pilot Hole 9650' 4300 MD 13813' TVD 94150'	20. BLM/BIA Bond No. on File NM-2575	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3789' GR	22. Approximate date work will start* 03.15.11	23. Estimated duration 25-30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan | 5. Operator Certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature Zeno Farris	Name (Printed/Typed) Zeno Farris	Date 03.07.11
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Title

Manager Operations Administration

Approved By (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date
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Title

FIELD MANAGER

Office

CARLSBAD FIELD OFFICE

APR - 5 2011

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.S. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

* (Instructions on page 2)

Capitan Controlled Water Basin

KZ 04/26/11

Approval Subject to General Requirements
& Special Stipulations Attached

APR 27 2011

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
4301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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APR 11 2011

HOBBSON CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 16, 2010

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-40118	Pool Code 65330	Pool Name YOUNG Parkway; Bone Spring
Property Code 38536	Property Name NORTH YOUNG 15 FEDERAL COM	Well Number 2
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3789'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	15	18 S	32 E		2310	SOUTH	330	WEST	LEA

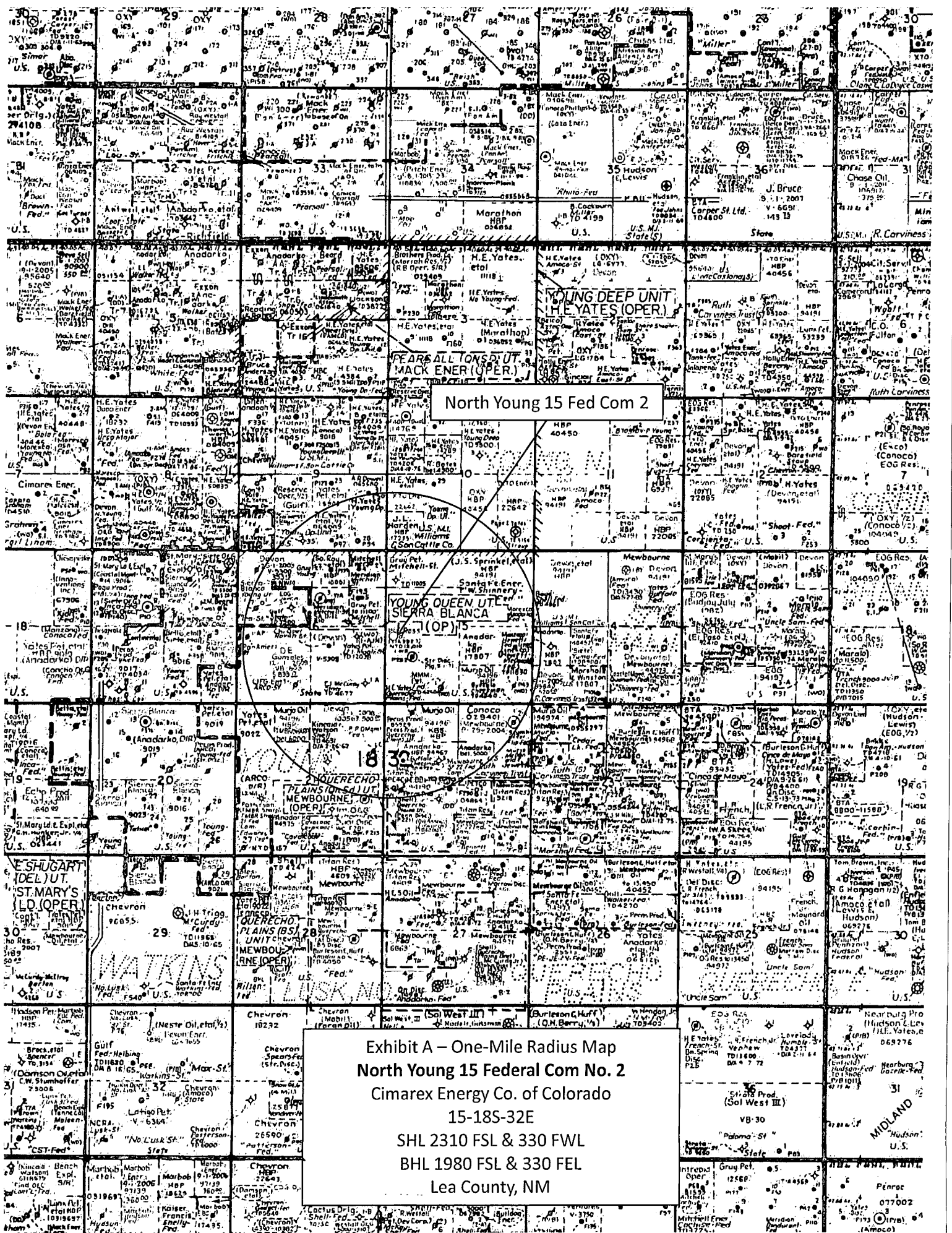
Bottom Hole Location If Different From Surface

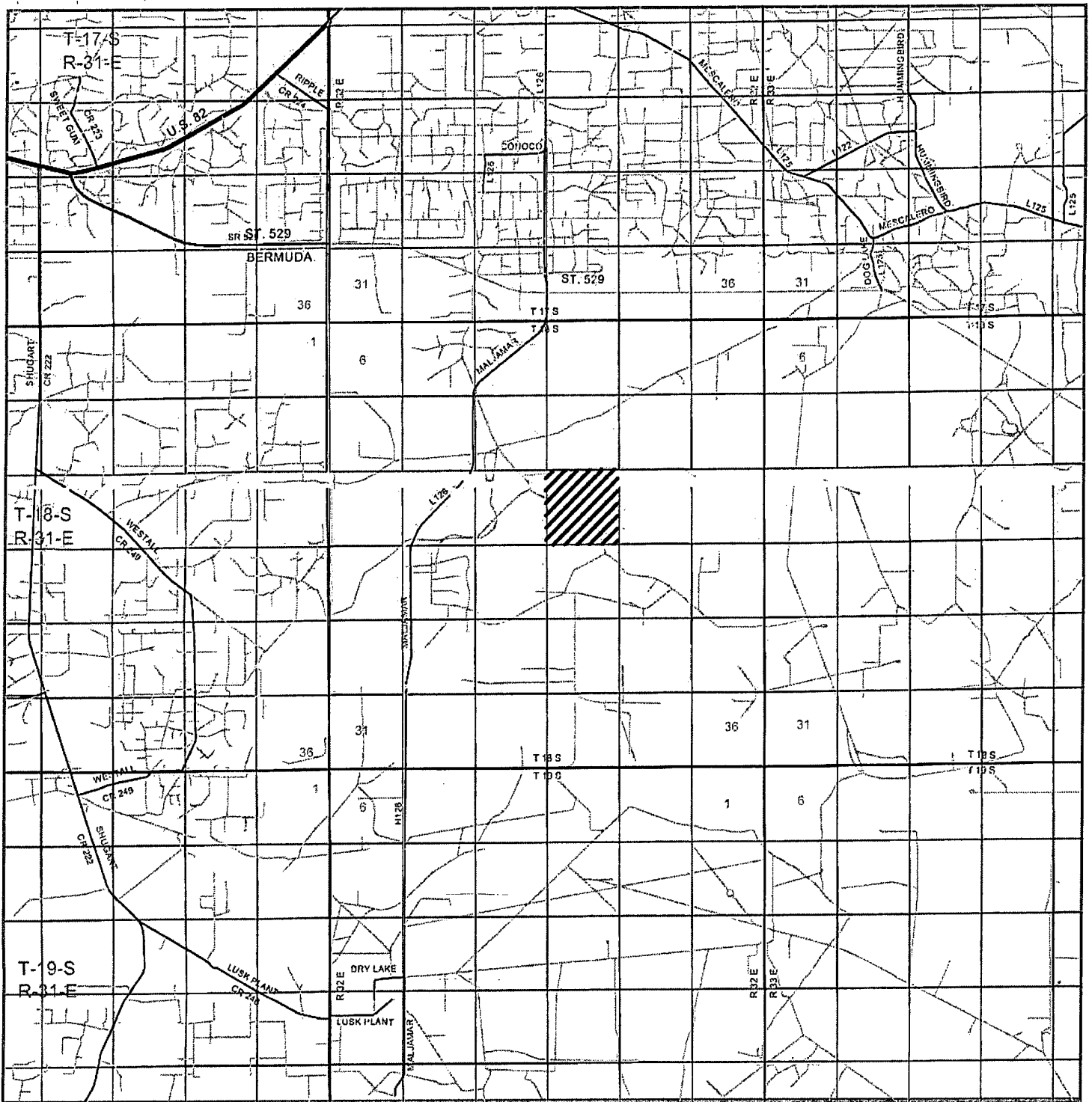
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	15	18 S	32 E		1980	SOUTH	330	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160		P	

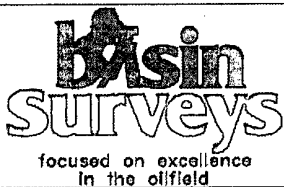
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SURFACE LOCATION Lat - N 32°44'47.732" Long - W 103°45'42.187" NMSPCE- N 635816.3 E 717081.6 (NAD-83) EOC 2290 FSL & 625 FWL PROPOSED BOTTOM HOLE LOCATION Lat - N 32°44'44.37" Long - W 103°44'48.09" NMSPCE- N 635501.76 E 721704.00 (NAD-83) Diagram showing well location (S.L.) and bottom hole location (B.H.) on a grid. Dimensions: 3792.5', 3796.5', 4634.1', 2310', 1980', 330'. Section numbers NM-125173 and NM-94192 are indicated.	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Zeno Farris</i> 7/7/2011 Signature Date Zeno Farris Printed Name Zfarris@cimarex.com Email Address SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. <i>GARY L. JONES</i> Date Surveyed 12/10/2010 Signature & Seal of Professional Surveyor Certificate No. Gary L. Jones 7977 BASIN SURVEYS 23786
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NORTH YOUNG 15 FEDERAL COM #2
 Located 2310' FSL and 330' FWL
 Section 15, Township 18 South, Range 32 East,
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
 (575) 392-2206 - Fax
 basinsurveys.com

W.O. Number: BJN 23786

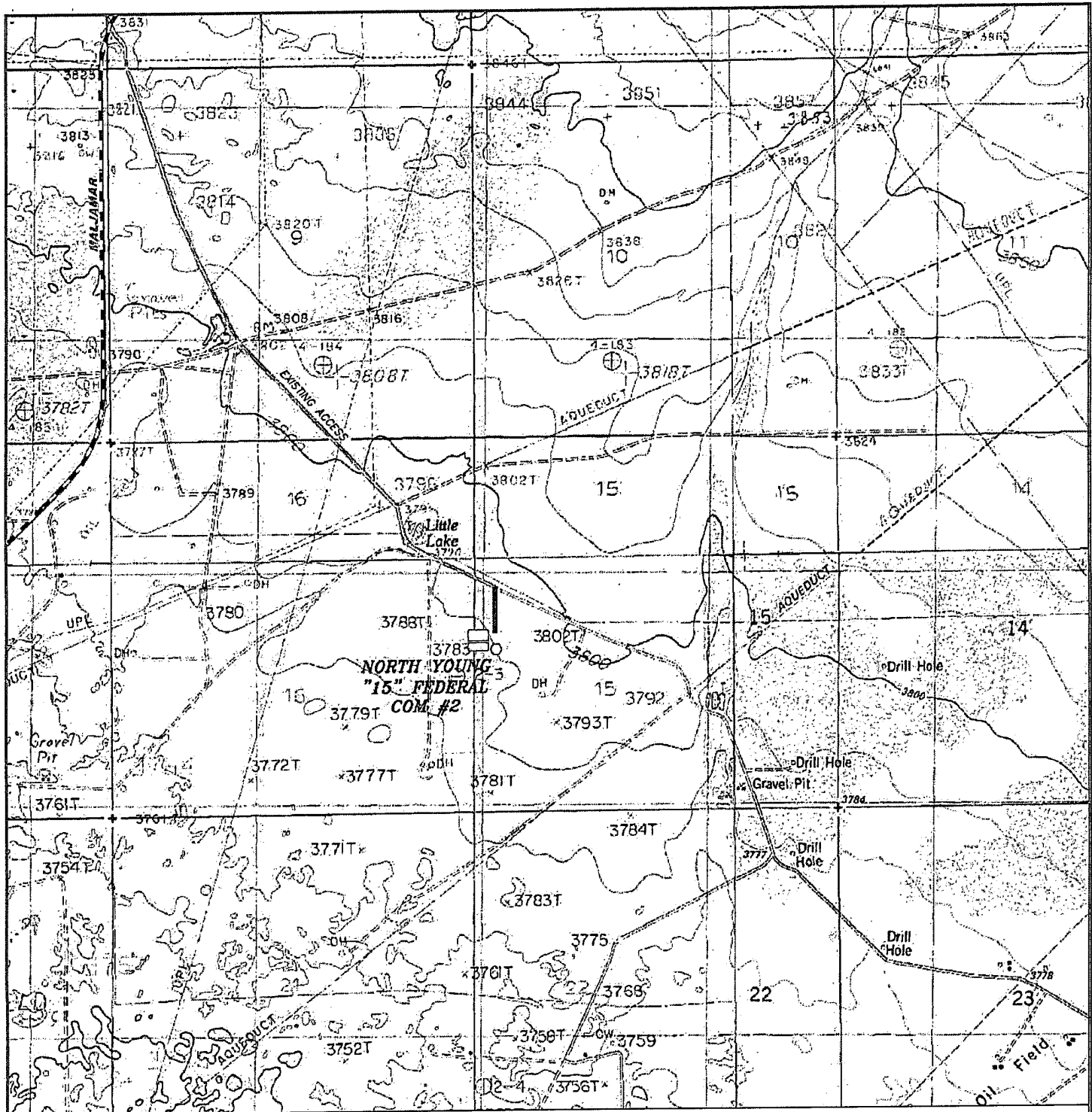
Survey Date: 12-20-2010

Scale: 1" = 2 Miles

Date: 12-27-2010

**CIMAREX
 ENERGY CO.
 OF COLORADO**

Exhibit B



NORTH YOUNG 15 FEDERAL COM #2 ☐ Battery
 Located 2310' FSL and 330' FWL
 Section 15, Township 18 South, Range 32 East,
 N.M.P.M., Lea County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
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 basin-surveys.com

W.O. Number: BJN 23786

Survey Date: 12-20-2010

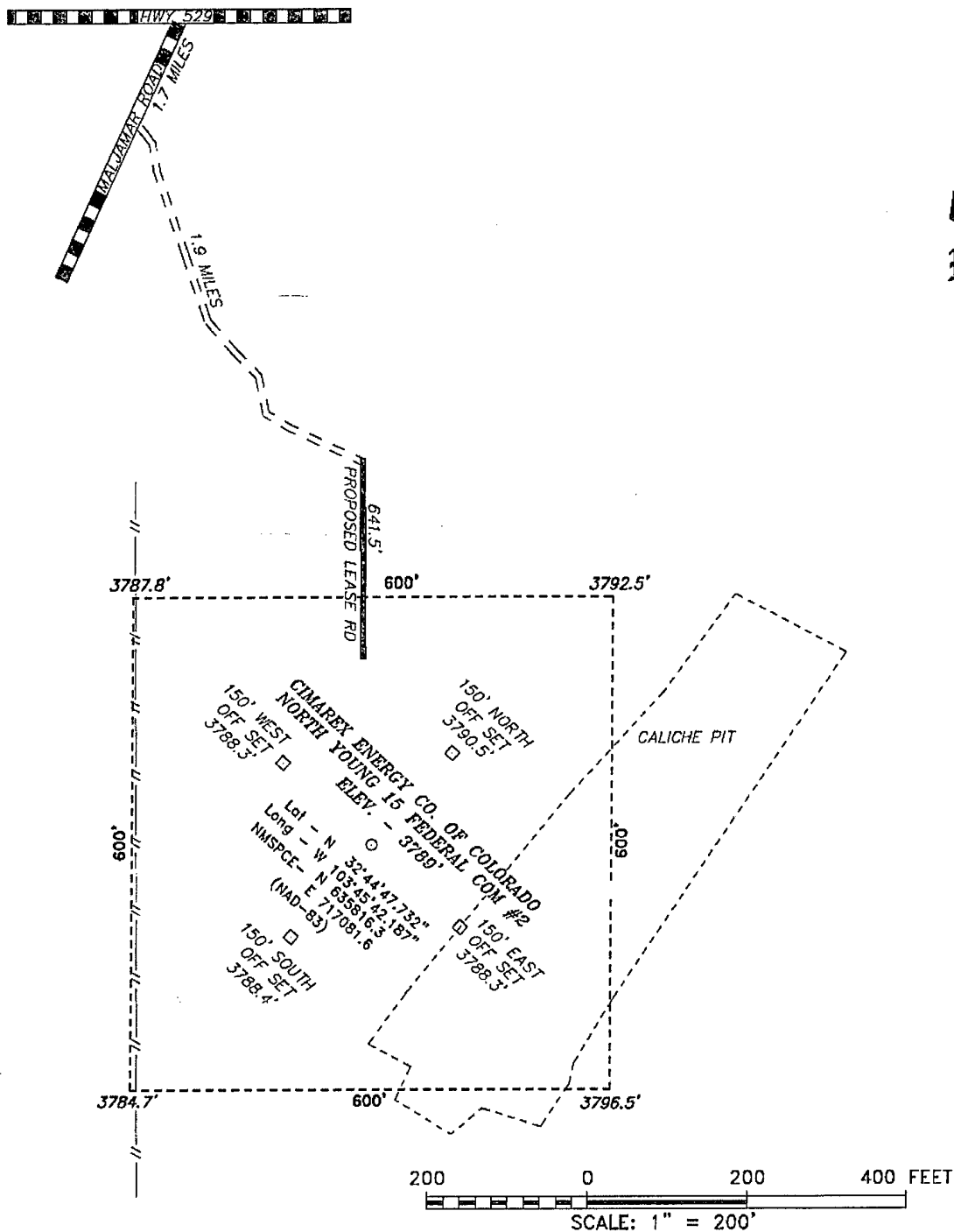
Scale: 1" = 2000'

Date: 12-27-2010

CIMAREX
ENERGY CO.
OF COLORADO

Exhibit C

SECTION 15, TOWNSHIP 18 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



Directions to Location:

FROM HWY 529, TURN SOUTH ON MALJAMAR ROAD
FOR 1.7 MILES, TURN EAST ON EXISTING ACCESS
ROAD FOR 1.9 MILES TO PROPOSED LEASE ROAD.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 23786	Drawn By: B. NIXON
--------------------	--------------------

Date: 12-27-2010	Disk: BJN 23786
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CIMAREX ENERGY CO. OF COLORADO

REF: NORTH YOUNG 15 FEDERAL COM #2 / WELL PAD TOPO

THE NORTH YOUNG 15 FEDERAL COM #2 LOCATED 2310'

FROM THE SOUTH LINE AND 330' FROM THE WEST LINE OF

SECTION 15, TOWNSHIP 18 SOUTH, RANGE 32 EAST,

N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 12-20-2010	Sheet 1 of 1 Sheets
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Exhibit C-1

North Young 15 Federal Com No. 2

Cimarex Energy Co. of Colorado

Unit L, Section 15

T18S-R32E, Lea County, NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1 Location: SHL 2310 FSL & 330 FWL
BHL 1980 FSL & 330 FEL

2 Elevation above sea level: 3789' GR

3 Geologic name of surface formation: Quaternary Alluvium Deposits

4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.

5 Proposed drilling depth: Pilot Hole 9650' MD 13813' TVD ⁹³⁰⁰~~9150~~

6 Estimated tops of geological markers:

Rustler	1200'	Delaware	5180'
T. Salt	1290'	Bone Spring	7850'
B. Salt	2540'	Wolfcamp	11100'
Yates	3020'	Strawn	12110'
Capitan	3650'	Morrow	12820'

7 Possible mineral bearing formation:

Bone Spring	Oil
Delaware	Oil
Yates/7 Rivers	Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to ¹²²⁵ 400'	8.4 - 8.6	28	NC	FW
400' to ²⁶⁰⁰ 2850'	10.0	30-32	NC	Brine water
2850' to 13813'	8.4 - 9.5	30-32	NC	FW, brine

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Proposed drilling Plan

Drill 8¾" pilot hole to 9650 and log. Set 275 sks HalCem -H 0.5% CFR-3 0.1% HR-60116.5 ppg yield 1.06 0% Excess cmt plug from 8954-9650. Kick off 8¾" lateral @ 9014 and drill to TD @ 13813. Run 5½" 17# P-110 LTC from 0-13813.

North Young 15 Federal Com No. 2

Cimarex Energy Co. of Colorado

Unit L, Section 15

T18S-R32E, Lea County, NM

9 Casing & Cementing Program:

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface	17½"	0' to 400'	New 13½"	48#	STC	H-40
Intermediate	12¼"	0' to 2850'	New 9½"	40#	LTC	J/K-55
Production	8¾"	0' to 13813'	New 5½"	17#	LTC	P-110

10 Cementing:

Surface

445SKS Halcem C + 4% Bentomite + 2% CaCl 14.2ppg 1.34yield 100% Excess

TOC Surface Centralizers per Onshore Order 2.III.B.1.f

Intermediate

Lead: 945SKS EconoCem + 5% salt + 5 lbm gilsonite 14.6ppg 1.54 yield 70% Excess

Tail: 200SKS HalCem + 1% CaCl 14.8ppg 1.34 yield 25% Excess

TOC Surface

Production

Lead: 995SKS EconoCem - H + 0.2 % HR-601 2.44 11.9ppg 2.44 yield 50% Excess

Tail: 1315SKS Versacem - H + 0.5% Halad(R)-344 + 0.4% CFR-3 + 1 lbm/sk salt + 0.1% HR-601 14.5ppg 1.22 yield 25% Excess

Centralizers Every 3rd joint in lateral to adequate cement every 100' unless

TOC 2650' lateral doglegs require greater spacing between centralizers.

According to the State Engineer, depth to ground water is 275.' Fresh water zones will be protected by setting 13½" casing at 400' and cementing to surface. Hydrocarbon zones will be protected by setting 9½" casing at 2850' and cementing to surface, and by setting 5½" casing at 13813' and cementing to 2650'.

<u>Collapse Factor</u>	<u>Burst Factor</u>	<u>Tension Factor</u>
1.125	1.125	1.6

11 Pressure control Equipment:

Exhibit "E". A 13½" 5000 PSI working pressure BOP tested to 3000 psi consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. Mud gas separator will be available when drilling in H2S areas.

BOP unit will be hydraulically operated. BOP will be nipped up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the 13½" casing through the running of production casing, the well will be equipped with a 5000 psi BOP system tested to 3000 psi.

BOPS will be tested by an independent service company to 250 psi low and 3000 psi high. Hydril will be tested to 250 psi low and 1500 psi high.

12 Testing, Logging and Coring Program: - See corA

- A. Mud logging program: 2 man unit from 3100' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H₂S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H₂S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H₂S Safety package on all wells, attached is an "H₂S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP 3000 psi Estimated BHT 130°

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take 30-35 days

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.

Bone Spring pay will be perforated and stimulated.

The proposed well will be tested and potentialized as an oil well.



Cimarex Energy Co.

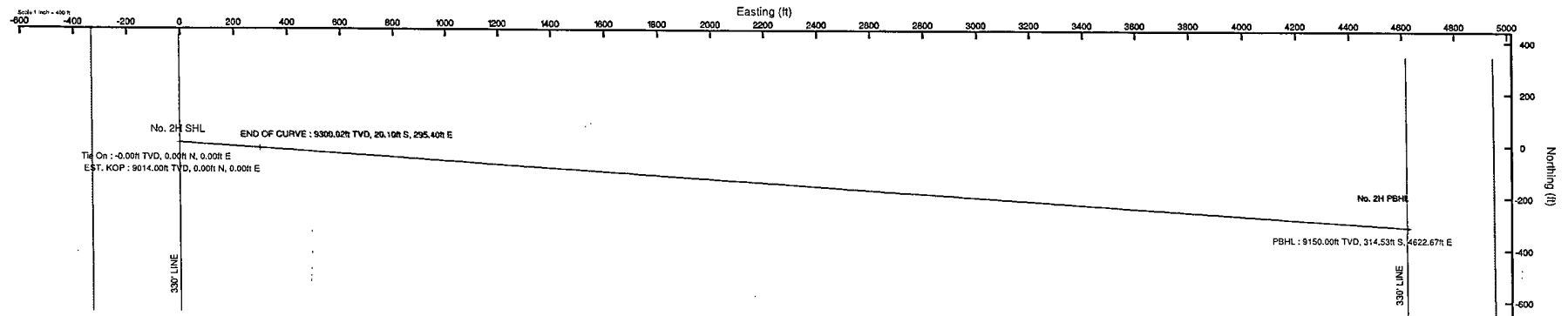
Location: Lea County, NM
Field: (North) Sec 15, T18S, R32E
Facility: North Young 15 Fed Com No. 2H

Slot: No. 2H SHL
Well: No. 2H
Wellbore: No. 2H PWB

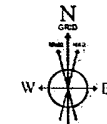
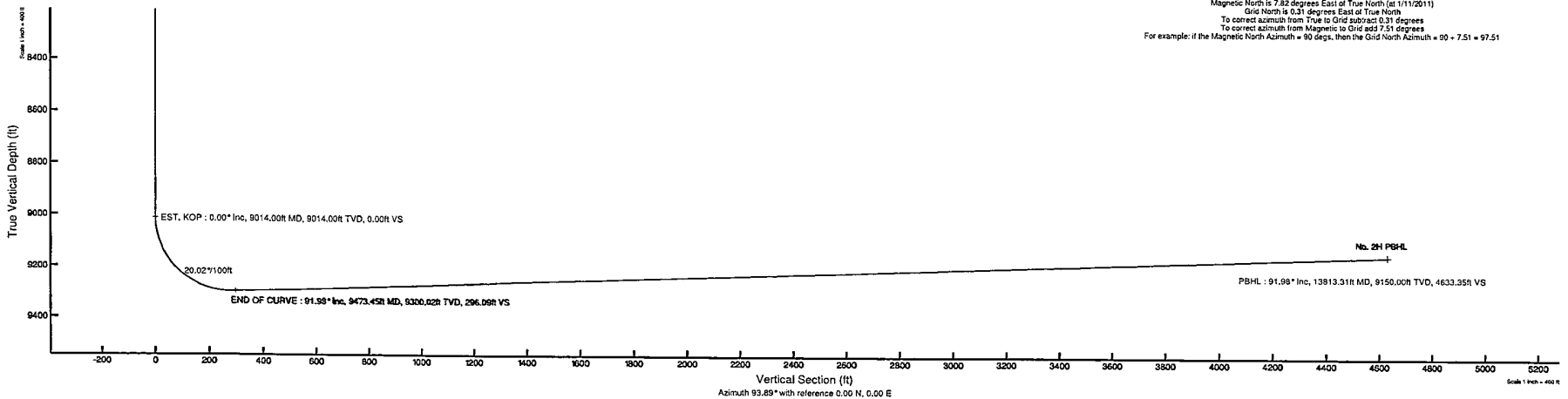


Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	93.892	0.00	0.00	0.00	0.00	0.00
EST. KOP	9014.00	0.000	93.892	9014.00	0.00	0.00	0.00	0.00
END OF CURVE	9473.45	91.981	93.892	9300.02	-20.10	295.40	20.02	296.09
PBHL	13813.31	91.981	93.892	9150.00	-314.53	4622.67	0.00	4633.35



Plot reference wellpath is Prelim_2	
True vertical depths are referenced to Rig on No. 2H SHL (KB)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 2H SHL (KB)	North Reference: Grid north
Rig on No. 2H SHL (KB) to Mean Sea Level: 3789 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: North Young 15 Fed Com No. 2H): -3789 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gmetoscr on 1/12/2011



BGGM (1945.0 to 2012.0) Dip: 60.66° Field: 49987.7 nT
Magnetic North is 7.82 degrees East of True North (at 1/11/2011)
Grid North is 0.31 degrees East of True North
To correct azimuth from True to Grid subtract 0.31 degrees
To correct azimuth from Magnetic to Grid add 7.51 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.51 = 97.51



Planned Wellpath Report

Prelim_2
Page 1 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(North) Sec 15, T18S, R32E	Wellbore	No. 2H PWB
Facility	North Young 15 Fed Com No. 2H		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Gomeoscr
Scale	0.999944	Report Generated	1/12/2011 at 10:04:10 AM
Convergence at slot	0.31° East	Database/Source file	WA Midland/No. 2H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W
Facility Reference Pt			717081.60	635816.30	32°44'47.733"N	103°45'42.187"W
Field Reference Pt			717424.50	633838.00	32°44'28.140"N	103°45'38.298"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 2H SHL (KB) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No. 2H SHL (KB) to Mean Sea Level	3789.00ft
Vertical Reference Pt	Rig on No. 2H SHL (KB)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 2H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	93.89°



Planned Wellpath Report

Prelim_2

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BAKER
HUGHES

INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(North) Sec 15, T18S, R32E	Wellbore	No. 2H PWB
Facility	North Young 15 Fed Com No. 2H		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	93.892	0.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	Tie On
100.00†	0.000	93.892	100.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
200.00†	0.000	93.892	200.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
300.00†	0.000	93.892	300.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
400.00†	0.000	93.892	400.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
500.00†	0.000	93.892	500.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
600.00†	0.000	93.892	600.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
700.00†	0.000	93.892	700.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
800.00†	0.000	93.892	800.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
900.00†	0.000	93.892	900.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1000.00†	0.000	93.892	1000.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1100.00†	0.000	93.892	1100.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1200.00†	0.000	93.892	1200.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1300.00†	0.000	93.892	1300.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1400.00†	0.000	93.892	1400.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1500.00†	0.000	93.892	1500.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1600.00†	0.000	93.892	1600.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1700.00†	0.000	93.892	1700.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1800.00†	0.000	93.892	1800.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
1900.00†	0.000	93.892	1900.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2000.00†	0.000	93.892	2000.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2100.00†	0.000	93.892	2100.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2200.00†	0.000	93.892	2200.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2300.00†	0.000	93.892	2300.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2400.00†	0.000	93.892	2400.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2500.00†	0.000	93.892	2500.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2600.00†	0.000	93.892	2600.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2700.00†	0.000	93.892	2700.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2800.00†	0.000	93.892	2800.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
2900.00†	0.000	93.892	2900.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3000.00†	0.000	93.892	3000.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3100.00†	0.000	93.892	3100.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3200.00†	0.000	93.892	3200.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3300.00†	0.000	93.892	3300.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3400.00†	0.000	93.892	3400.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3500.00†	0.000	93.892	3500.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3600.00†	0.000	93.892	3600.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3700.00†	0.000	93.892	3700.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3800.00†	0.000	93.892	3800.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
3900.00†	0.000	93.892	3900.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
4000.00†	0.000	93.892	4000.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
4100.00†	0.000	93.892	4100.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
4200.00†	0.000	93.892	4200.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
4300.00†	0.000	93.892	4300.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
4400.00†	0.000	93.892	4400.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(North) Sec 15, T18S, R32E	Wellbore	No. 2H PWB
Facility	North Young 15 Fed Com No. 2H		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4500.00†	0.000	93.892	4500.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
4600.00†	0.000	93.892	4600.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
4700.00†	0.000	93.892	4700.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
4800.00†	0.000	93.892	4800.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
4900.00†	0.000	93.892	4900.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5000.00†	0.000	93.892	5000.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5100.00†	0.000	93.892	5100.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5200.00†	0.000	93.892	5200.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5300.00†	0.000	93.892	5300.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5400.00†	0.000	93.892	5400.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5500.00†	0.000	93.892	5500.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5600.00†	0.000	93.892	5600.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5700.00†	0.000	93.892	5700.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5800.00†	0.000	93.892	5800.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
5900.00†	0.000	93.892	5900.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6000.00†	0.000	93.892	6000.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6100.00†	0.000	93.892	6100.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6200.00†	0.000	93.892	6200.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6300.00†	0.000	93.892	6300.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6400.00†	0.000	93.892	6400.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6500.00†	0.000	93.892	6500.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6600.00†	0.000	93.892	6600.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6700.00†	0.000	93.892	6700.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6800.00†	0.000	93.892	6800.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
6900.00†	0.000	93.892	6900.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7000.00†	0.000	93.892	7000.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7100.00†	0.000	93.892	7100.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7200.00†	0.000	93.892	7200.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7300.00†	0.000	93.892	7300.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7400.00†	0.000	93.892	7400.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7500.00†	0.000	93.892	7500.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7600.00†	0.000	93.892	7600.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7700.00†	0.000	93.892	7700.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7800.00†	0.000	93.892	7800.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
7900.00†	0.000	93.892	7900.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8000.00†	0.000	93.892	8000.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8100.00†	0.000	93.892	8100.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8200.00†	0.000	93.892	8200.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8300.00†	0.000	93.892	8300.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8400.00†	0.000	93.892	8400.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8500.00†	0.000	93.892	8500.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8600.00†	0.000	93.892	8600.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8700.00†	0.000	93.892	8700.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8800.00†	0.000	93.892	8800.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
8900.00†	0.000	93.892	8900.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(North) Sec 15, T18S, R32E	Wellbore	No. 2H PWB
Facility	North Young 15 Fed Com No. 2H		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
9000.00†	0.000	93.892	9000.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	
9014.00	0.000	93.892	9014.00	0.00	0.00	0.00	717081.60	635816.30	32°44'47.733"N	103°45'42.187"W	0.00	EST. KOP
9100.00†	17.217	93.892	9098.71	12.82	-0.87	12.79	717094.39	635815.43	32°44'47.723"N	103°45'42.038"W	20.02	
9200.00†	37.237	93.892	9187.18	58.34	-3.96	58.21	717139.81	635812.34	32°44'47.690"N	103°45'41.506"W	20.02	
9300.00†	57.257	93.892	9254.72	131.40	-8.92	131.10	717212.69	635807.38	32°44'47.637"N	103°45'40.653"W	20.02	
9400.00†	77.277	93.892	9293.17	223.16	-15.15	222.65	717304.24	635801.15	32°44'47.571"N	103°45'39.582"W	20.02	
9473.45	91.981	93.892	9300.02	296.09	-20.10	295.40	717376.99	635796.20	32°44'47.518"N	103°45'38.730"W	20.02	END OF CURVE
9500.00†	91.981	93.892	9299.10	322.62	-21.90	321.88	717403.46	635794.40	32°44'47.499"N	103°45'38.420"W	0.00	
9600.00†	91.981	93.892	9295.65	422.56	-28.69	421.59	717503.17	635787.62	32°44'47.426"N	103°45'37.253"W	0.00	
9700.00†	91.981	93.892	9292.19	522.50	-35.47	521.30	717602.87	635780.83	32°44'47.354"N	103°45'36.086"W	0.00	
9800.00†	91.981	93.892	9288.73	622.45	-42.25	621.01	717702.57	635774.05	32°44'47.281"N	103°45'34.919"W	0.00	
9900.00†	91.981	93.892	9285.28	722.39	-49.04	720.72	717802.28	635767.26	32°44'47.209"N	103°45'33.752"W	0.00	
10000.00†	91.981	93.892	9281.82	822.33	-55.82	820.43	717901.98	635760.48	32°44'47.137"N	103°45'32.585"W	0.00	
10100.00†	91.981	93.892	9278.36	922.27	-62.61	920.14	718001.69	635753.70	32°44'47.064"N	103°45'31.418"W	0.00	
10200.00†	91.981	93.892	9274.91	1022.21	-69.39	1019.85	718101.39	635746.91	32°44'46.992"N	103°45'30.251"W	0.00	
10300.00†	91.981	93.892	9271.45	1122.15	-76.18	1119.56	718201.09	635740.13	32°44'46.919"N	103°45'29.084"W	0.00	
10400.00†	91.981	93.892	9267.99	1222.09	-82.96	1219.27	718300.80	635733.35	32°44'46.847"N	103°45'27.917"W	0.00	
10500.00†	91.981	93.892	9264.54	1322.03	-89.74	1318.98	718400.50	635726.56	32°44'46.774"N	103°45'26.751"W	0.00	
10600.00†	91.981	93.892	9261.08	1421.97	-96.53	1418.69	718500.21	635719.78	32°44'46.702"N	103°45'25.584"W	0.00	
10700.00†	91.981	93.892	9257.62	1521.91	-103.31	1518.40	718599.91	635712.99	32°44'46.629"N	103°45'24.417"W	0.00	
10800.00†	91.981	93.892	9254.16	1621.85	-110.10	1618.11	718699.61	635706.21	32°44'46.557"N	103°45'23.250"W	0.00	
10900.00†	91.981	93.892	9250.71	1721.79	-116.88	1717.82	718799.32	635699.43	32°44'46.484"N	103°45'22.083"W	0.00	
11000.00†	91.981	93.892	9247.25	1821.73	-123.67	1817.53	718899.02	635692.64	32°44'46.412"N	103°45'20.916"W	0.00	
11100.00†	91.981	93.892	9243.79	1921.67	-130.45	1917.24	718998.73	635685.86	32°44'46.339"N	103°45'19.749"W	0.00	
11200.00†	91.981	93.892	9240.34	2021.61	-137.23	2016.95	719098.43	635679.07	32°44'46.267"N	103°45'18.582"W	0.00	
11300.00†	91.981	93.892	9236.88	2121.55	-144.02	2116.65	719198.13	635672.29	32°44'46.194"N	103°45'17.415"W	0.00	
11400.00†	91.981	93.892	9233.42	2221.49	-150.80	2216.36	719297.84	635665.51	32°44'46.122"N	103°45'16.248"W	0.00	
11500.00†	91.981	93.892	9229.97	2321.43	-157.59	2316.07	719397.54	635658.72	32°44'46.049"N	103°45'15.081"W	0.00	
11600.00†	91.981	93.892	9226.51	2421.37	-164.37	2415.78	719497.24	635651.94	32°44'45.977"N	103°45'13.914"W	0.00	
11700.00†	91.981	93.892	9223.05	2521.31	-171.16	2515.49	719596.95	635645.15	32°44'45.904"N	103°45'12.747"W	0.00	
11800.00†	91.981	93.892	9219.60	2621.25	-177.94	2615.20	719696.65	635638.37	32°44'45.831"N	103°45'11.580"W	0.00	
11900.00†	91.981	93.892	9216.14	2721.19	-184.72	2714.91	719796.36	635631.59	32°44'45.759"N	103°45'10.413"W	0.00	
12000.00†	91.981	93.892	9212.68	2821.13	-191.51	2814.62	719896.06	635624.80	32°44'45.686"N	103°45'09.246"W	0.00	
12100.00†	91.981	93.892	9209.23	2921.07	-198.29	2914.33	719995.76	635618.02	32°44'45.614"N	103°45'08.079"W	0.00	
12200.00†	91.981	93.892	9205.77	3021.01	-205.08	3014.04	720095.47	635611.24	32°44'45.541"N	103°45'06.912"W	0.00	
12300.00†	91.981	93.892	9202.31	3120.95	-211.86	3113.75	720195.17	635604.45	32°44'45.469"N	103°45'05.745"W	0.00	
12400.00†	91.981	93.892	9198.86	3220.89	-218.65	3213.46	720294.88	635597.67	32°44'45.396"N	103°45'04.578"W	0.00	
12500.00†	91.981	93.892	9195.40	3320.83	-225.43	3313.17	720394.58	635590.88	32°44'45.324"N	103°45'03.411"W	0.00	
12600.00†	91.981	93.892	9191.94	3420.77	-232.21	3412.88	720494.28	635584.10	32°44'45.251"N	103°45'02.244"W	0.00	
12700.00†	91.981	93.892	9188.49	3520.71	-239.00	3512.59	720593.99	635577.32	32°44'45.179"N	103°45'01.078"W	0.00	
12800.00†	91.981	93.892	9185.03	3620.65	-245.78	3612.30	720693.69	635570.53	32°44'45.106"N	103°44'59.911"W	0.00	
12900.00†	91.981	93.892	9181.57	3720.59	-252.57	3712.01	720793.40	635563.75	32°44'45.033"N	103°44'58.744"W	0.00	
13000.00†	91.981	93.892	9178.11	3820.53	-259.35	3811.72	720893.10	635556.96	32°44'44.961"N	103°44'57.577"W	0.00	
13100.00†	91.981	93.892	9174.66	3920.47	-266.14	3911.43	720992.80	635550.18	32°44'44.888"N	103°44'56.410"W	0.00	
13200.00†	91.981	93.892	9171.20	4020.41	-272.92	4011.14	721092.51	635543.40	32°44'44.816"N	103°44'55.243"W	0.00	



Planned Wellpath Report

Prelim_2
Page 5 of 5



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Lea County, NM	Well	No. 2H
Field	(North) Sec 15, T18S, R32E	Wellbore	No. 2H PWB
Facility	North Young 15 Fed Com No. 2H		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13300.00†	91.981	93.892	9167.74	4120.35	-279.70	4110.85	721192.21	635536.61	32°44'44.743"N	103°44'54.076"W	0.00	
13400.00†	91.981	93.892	9164.29	4220.29	-286.49	4210.56	721291.92	635529.83	32°44'44.671"N	103°44'52.909"W	0.00	
13500.00†	91.981	93.892	9160.83	4320.23	-293.27	4310.27	721391.62	635523.04	32°44'44.598"N	103°44'51.742"W	0.00	
13600.00†	91.981	93.892	9157.37	4420.17	-300.06	4409.98	721491.32	635516.26	32°44'44.525"N	103°44'50.575"W	0.00	
13700.00†	91.981	93.892	9153.92	4520.11	-306.84	4509.69	721591.03	635509.48	32°44'44.453"N	103°44'49.408"W	0.00	
13800.00†	91.981	93.892	9150.46	4620.05	-313.63	4609.40	721690.73	635502.69	32°44'44.380"N	103°44'48.241"W	0.00	
13813.31	91.981	93.892	9150.00†	4633.35	-314.53	4622.67	721704.00	635501.79	32°44'44.371"N	103°44'48.086"W	0.00	PBHL

HOLE & CASING SECTIONS Ref Wellbore: No. 2H PWB Ref Wellpath: Prelim_2									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.875in Open Hole	0.00	2850.00	2850.00	0.00	2850.00	0.00	0.00	0.00	0.00
8.75in Open Hole	2850.00	13813.31	10963.31	2850.00	9150.00	0.00	0.00	-314.53	4622.67

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 2H PBHL	13813.31	9150.00	-314.53	4622.67	721704.00	635501.79	32°44'44.371"N	103°44'48.086"W	point

SURVEY PROGRAM Ref Wellbore: No. 2H PWB Ref Wellpath: Prelim_2				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	13813.31	NaviTrak (Standard)		No. 2H PWB

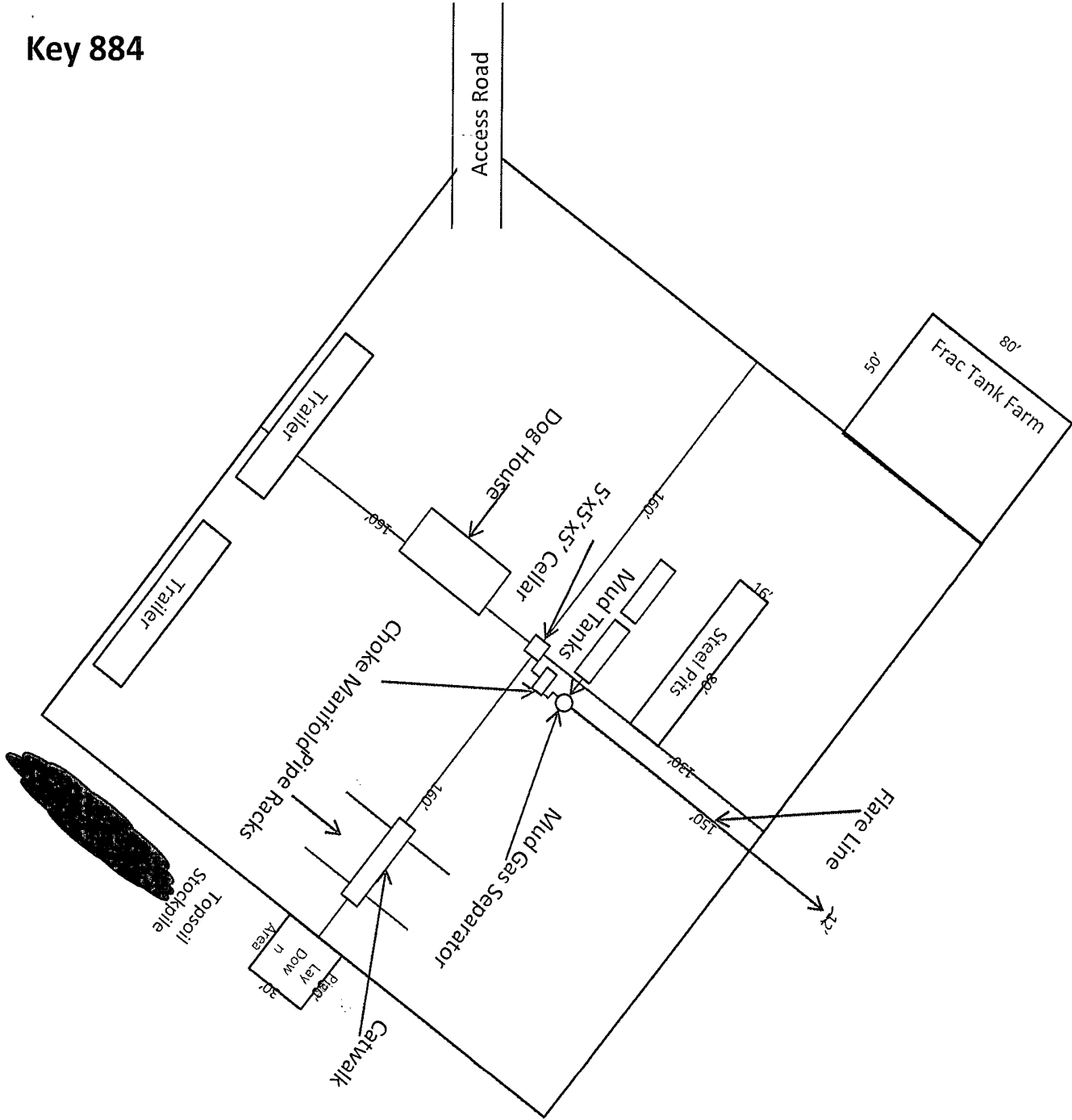


Exhibit D – Rig Diagram
North Young 15 Federal Com No. 2
 Cimarex Energy Co. of Colorado
 15-18S-32E
 SHL 2310 FSL & 330 FWL
 BHL 1980 FSL & 330 FEL
 Lea County, NM

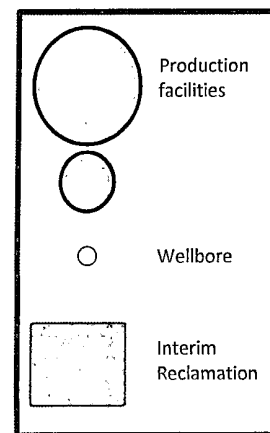
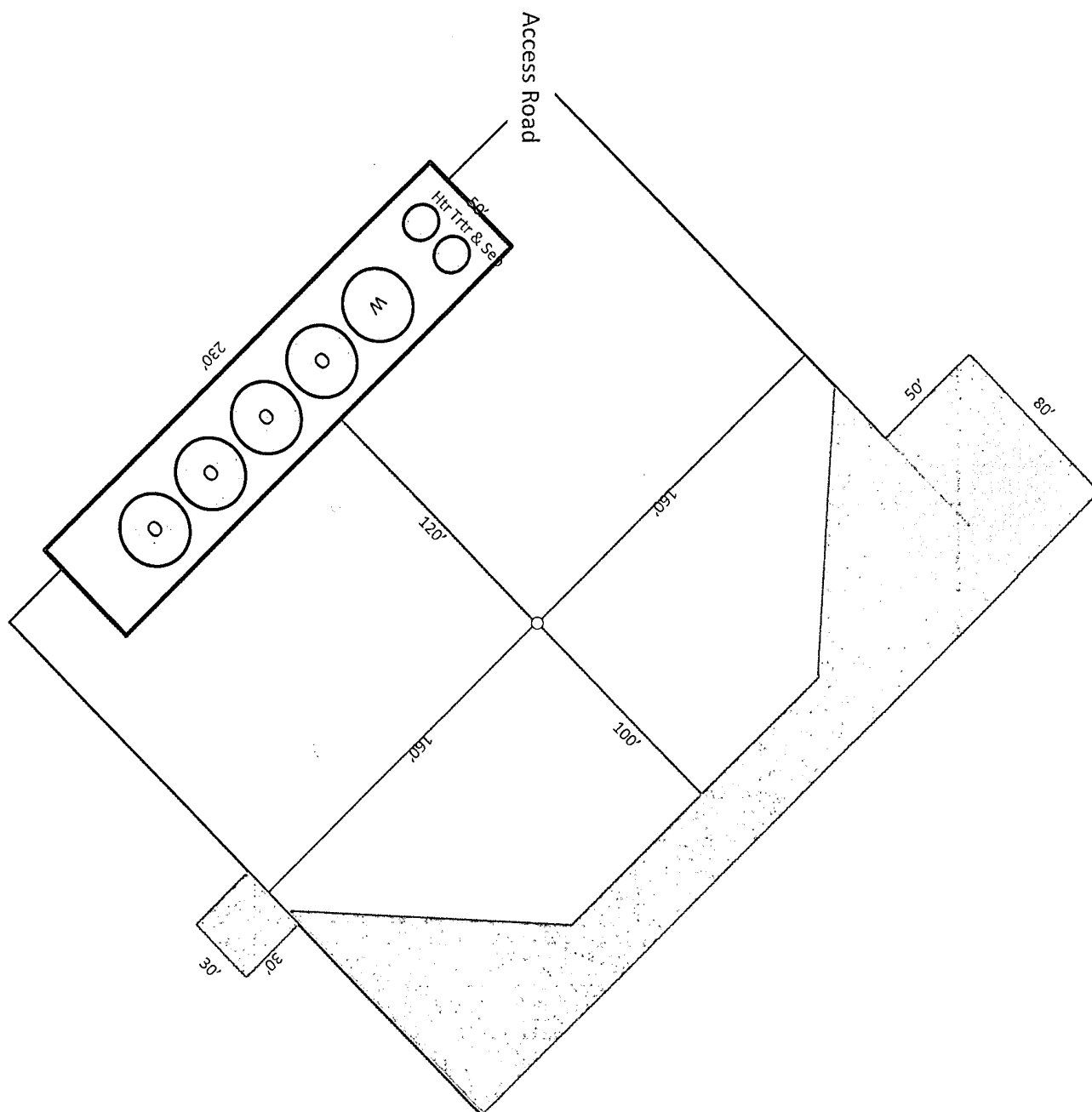


Exhibit D-1
 Production Facilities Layout Diagram
North Young 15 Federal Com No. 2
 Cimarex Energy Co. of Colorado
 15-18S-32E
 SHL 2310 FSL & 330 FWL
 BHL 1980 FSL & 330 FEL
 Lea County, NM

SR & A

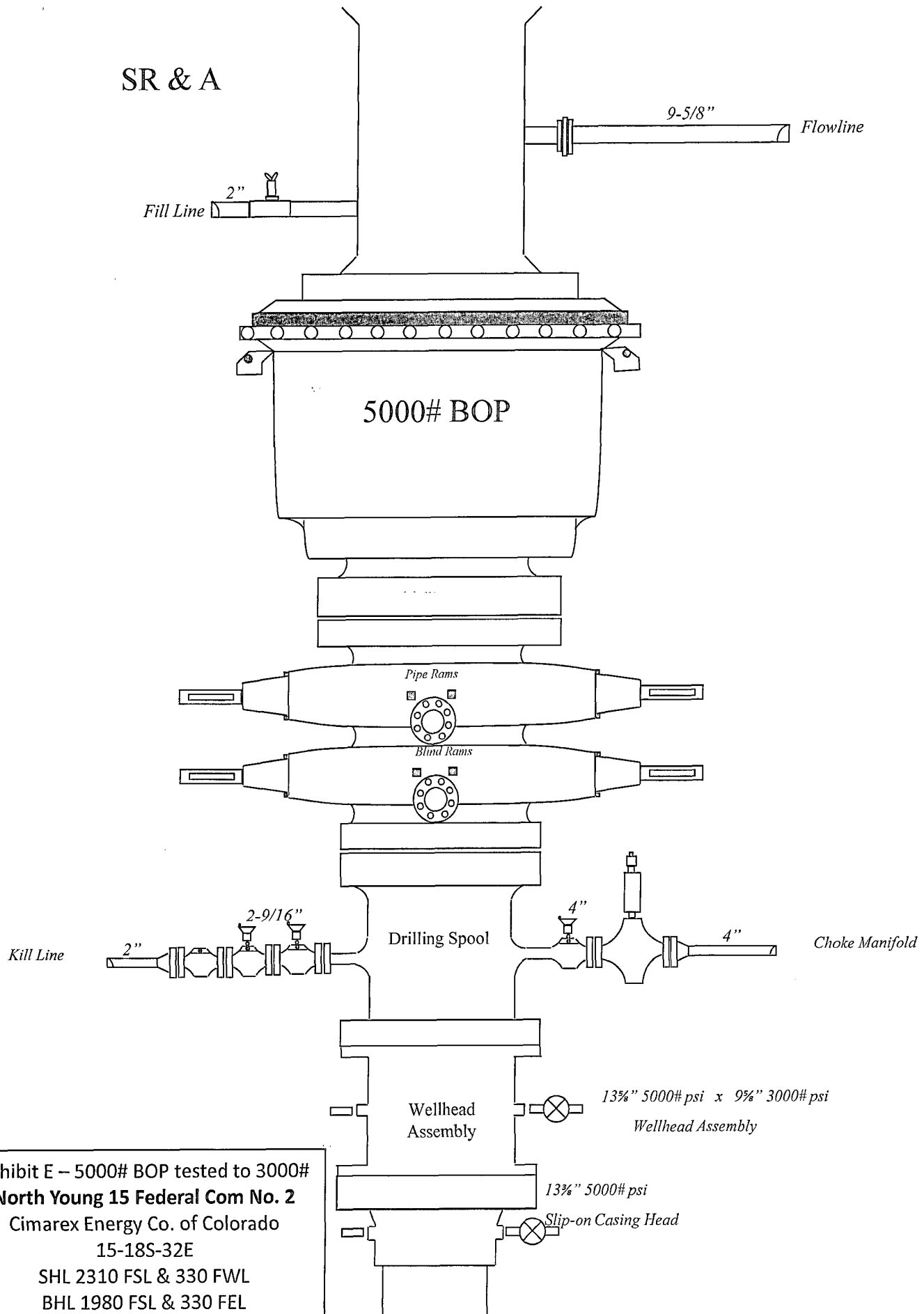
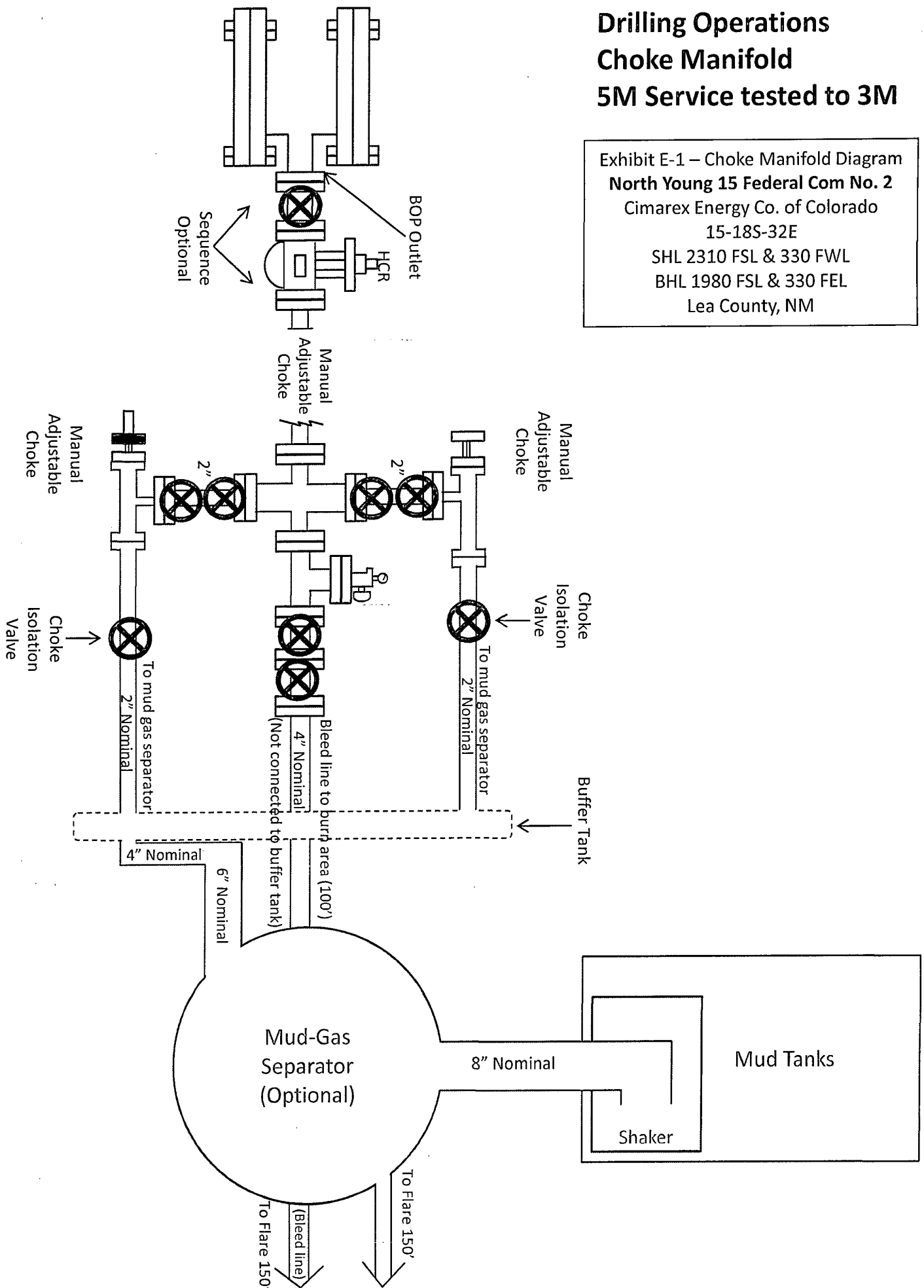


Exhibit E – 5000# BOP tested to 3000#
North Young 15 Federal Com No. 2
Cimarex Energy Co. of Colorado
15-18S-32E
SHL 2310 FSL & 330 FWL
BHL 1980 FSL & 330 FEL
Lea County, NM

Drilling Operations Choke Manifold 5M Service tested to 3M

Exhibit E-1 – Choke Manifold Diagram
North Young 15 Federal Com No. 2
Cimarex Energy Co. of Colorado
15-18S-32E
SHL 2310 FSL & 330 FWL
BHL 1980 FSL & 330 FEL
Lea County, NM



Hydrogen Sulfide Drilling Operations Plan
North Young 15 Federal Com No. 2
Cimarex Energy Co. of Colorado
Unit L, Section 15
T18S-R32E, Lea County, NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:

- A. Characteristics of H₂S
- B. Physical effects and hazards
- C. Proper use of safety equipment and life support systems.
- D. Principle and operation of H₂S detectors, warning system and briefing areas.
- E. Evacuation procedure, routes and first aid.
- F. Proper use of 30 minute pressure demand air pack.

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- 2 H₂S Detection and Alarm Systems:

- A. H₂S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.

- 3 Windsock and/or wind streamers:

- A. Windsock at mudpit area should be high enough to be visible.
- B. Windsock at briefing area should be high enough to be visible.

- 4 Condition Flags and Signs:

- A. Warning sign on access road to location.
- B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H₂S present in dangerous concentration). Only emergency personnel admitted to location.

- 5 Well control equipment:

- A. See exhibit "E"

- 6 Communication:

- A. While working under masks chalkboards will be used for communication.
- B. Hand signals will be used where chalk board is inappropriate.
- C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

- 7 Drillstem Testing:

No DSTs or cores are planned at this time.

- 8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.

- 9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

H₂S Contingency Plan
North Young 15 Federal Com No. 2
Cimarex Energy Co. of Colorado
Unit L, Section 15
T18S-R32E, Lea County, NM

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must:

- ★ Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- ★ Evacuate any public places encompassed by the 100 ppm ROE.
- ★ Be equipped with H₂S monitors and air packs in order to control the release.
- ★ Use the "buddy system" to ensure no injuries occur during the response.
- ★ Take precautions to avoid personal injury during this operation.
- ★ Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- ★ Have received training in the:
 - ◆ Detection of H₂S, and
 - ◆ Measures for protection against the gas,
 - ◆ Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H₂S Contingency Plan Emergency Contacts
North Young 15 Federal Com No. 2
 Cimarex Energy Co. of Colorado
 Unit L, Section 15
 T18S-R32E, Lea County, NM

Company Office

Cimarex Energy Co. of Colorado	800-969-4789
Co. Office and After-Hours Menu	

Key Personnel

Name	Title	Office	Mobile
Doug Park	Drilling Manager	432-620-1934	972-333-1407
Dee Smith	Drilling Super	432-620-1933	972-882-1010
Jim Evans	Drilling Super	432-620-1929	972-465-0564
Roy Shirley	Field Super		432-634-2136

Artesia

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

Santa Fe

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

National

National Emergency Response Center (Washington, D.C.)	800-424-8802
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Medical

Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

Other

Boots & Coots IWC	800-256-9688	or	281-931-8884
Cudd Pressure Control	432-699-0139	or	432-563-3356
Halliburton	575-746-2757		
B.J. Services	575-746-3569		